

## **SHOPP Asset Management Pilot Request Form**

SHOPPCPR: Ver 3 11/14

	SHUPI	Asset IVI	anagement	-liot Ket	quest ro	Submit	tal Date
		ortation Program				Cusimi	ital Date
State	Highway Ope	eration and Prote	ection Program (SHC	OPP) Pro	oject Manage	r Kannu Balan	
					Phone	(510) 622-1760	
Dist	County	Route Pr	refix PM P	refix PM	EA	PPNO	Project ID
04 Sa	an Mateo	280	R 9.1	R 12.9	2A97	0	04-1200-0161
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Replace or line cu	ulverts, repair	slope erosion wi	ith RSP, repair settli	ng pavement	with injection	grouting	
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PA&ED / M2	00 02/28/20	019	R/W Cert / M4	10 03/31/20	)20	CCA / M600	12/30/2021
PS&E / M38	02/28/20	020	RTL / M460	04/15/20	)20	END Project / M	800 12/30/2023
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(Escala	Capital (\$1,00 Ited to FY of Pro	ogramming)	- [	FY	Cost	(Separate mul	tiple Districts with a comma
١	FY	Cost	PA & ED	2018/19	\$1,191	State Assemb	ily 24
R/W	2021/22	\$100	PS & E	2019/20	\$1,507	State Senate	13
Construction	2021/22	\$8,950	R/W	2019/20	\$85	State Seriate	
	Total Capital	\$9,050	Construction	2021/22	\$2,072	Congressiona	14, 18
				Total Support	\$4,855		
Approved	Der	nied				CAPITAL CONSTRU COST ESCALATION	
District SFP (Print)	DOKNH	HALLYEN	District S		In My	<del>///</del>	Phone (90) 286-6293
District Director (Print)	BIJAN	HALLYEN SARTIDI	District Di (Sign	irector /	3112.9	ant	Phone 510.286.5900
SHOPP Exec.			SHOPP I		1/	· ·	
(Print)			(Sign	n)	1073		Phone

# SHOPP Long Lead Request Form Attachment

San Mateo

EFIS: 04-1200-0161

# Multiple Locations Listing

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Location	Perf Measure #	Performance Measure	County	Route	Prefix	PM	Prefix	РМ	Bridge Number If Applicable
1	9	Drainage Systems	San Mateo	280	R	9.1	R	10.5	125
2	1	Location(s)	San Mateo	280	R	12.9			
3	1	Drainage Systems	Santa Clara	280		12.9			

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1	9	Drainage Systems	San Mateo	280	R	9.1	R	10.5	135
2	1	Location(s)	San Mateo	280	R	12.9			
3	1	Drainage Systems	Santa Clara	280		12.9		每	.07
4	1	Location(s)	Santa Clara	280		18.4		18.8	
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#### Asset Management Pilot Project Nomination

#### SM, SCI-280-PM R9.1/R12.9, 12.9/18.8

August 13, 2015

This pilot project proposes using asset management principles to address the overall transportation needs of a major transportation project on Route 280 (I-280) in San Mateo and Santa Clara counties. This pilot project will quantify the safety and rehabilitation needs and will propose the corresponding programming for each need.

#### **Project Background**

This project proposes to address the following pavement, slope stability, and drainage needs:

Route 280 in San Mateo County near San Carlos

- Replace or line culverts from Edgewood Road (PM R9.1) to Route 92 (PM R10.5)
- Repair slope erosion with rock slope protection (RSP) at Crystal Springs Road (PM R12.9)

Route 280 in Santa Clara County in Mountain View and in Los Altos Hills

- Replace failed culvert and repair sinkhole at Mora Drive (PM 12.9)
- Repair settling pavement with injection grouting at Page Mill Road (PM 18.4/18.8)

The total estimated need is \$13,905,000, none of which are currently programmed.

#### Safety

For the drainage in the San Mateo County portion, culverts along the identified stretch of Route 280 are deteriorated or materially failed. When culverts are no longer structurally sound or have rotted completely away, the ground above collapses, causing the appearance of sinkholes on a heavily traveled commute route. Rehabilitating the culverts will also contribute to worker safety, as the pavement has been known to collapse under the weight of maintenance vehicles.

The pavement settlement in the Santa Clara County portion causes a sudden pavement dip on a freeway route. This can lead to vehicle damage or loss of driver control. Maintenance workers must continually go out to this location for pavement leveling work. If the injection grouting can be implemented, worker safety will be improved from decreased exposure.

## **Stewardship and Efficiency Needs**

The following SHOPP-related needs exist within the project limits:

Item (Program)	Performance Measures	Description of Work	Cost
Drainage System (151)	10 Drainage Systems	Replace or line culverts for 9 drainage systems from Edgewood Road to Route 92 in San Mateo County, replace 1 drainage system at Mora Road in Santa Clara County, work includes necessary pavement repairs	\$11,360,000
Protective Betterment (150)	2 Locations	Repair slope erosion with RSP at Crystal Springs Road in San Mateo County, inject grout into subsurface voids at Page Mill Road, includes necessary pavement repairs	\$2,545,000

## Sustainability, Livability, and Economy

Elements of the project reduce the impacts of the transportation system upon the environment. The drainage and slope erosion locations in San Mateo County are within the drainage shed of the Crystal Springs Reservoir, as well as creeks that drain into San Francisco Bay. Slope erosion and damaged drainage allow additional transport of sediment, a detriment to water quality.

Making the necessary drainage system repairs will also reduce disruption to commute traffic. The sinkholes cause lane loss and closure for emergency work. Likewise, repairing continually settling pavement disrupts traffic.

## **System Performance**

Implementing the necessary drainage system repairs will reduce disruption to commute traffic by eliminating the cause of recurring emergency work. The drainage system is reaching, or has reached, the end of its useful life and must be rehabilitated. Over the past 5 years, there were over \$3 million in emergency projects due to sinkholes along this stretch of Route 280.

#### **Funding Plan**

The following table depicts the un-programmed needs broken down by component.

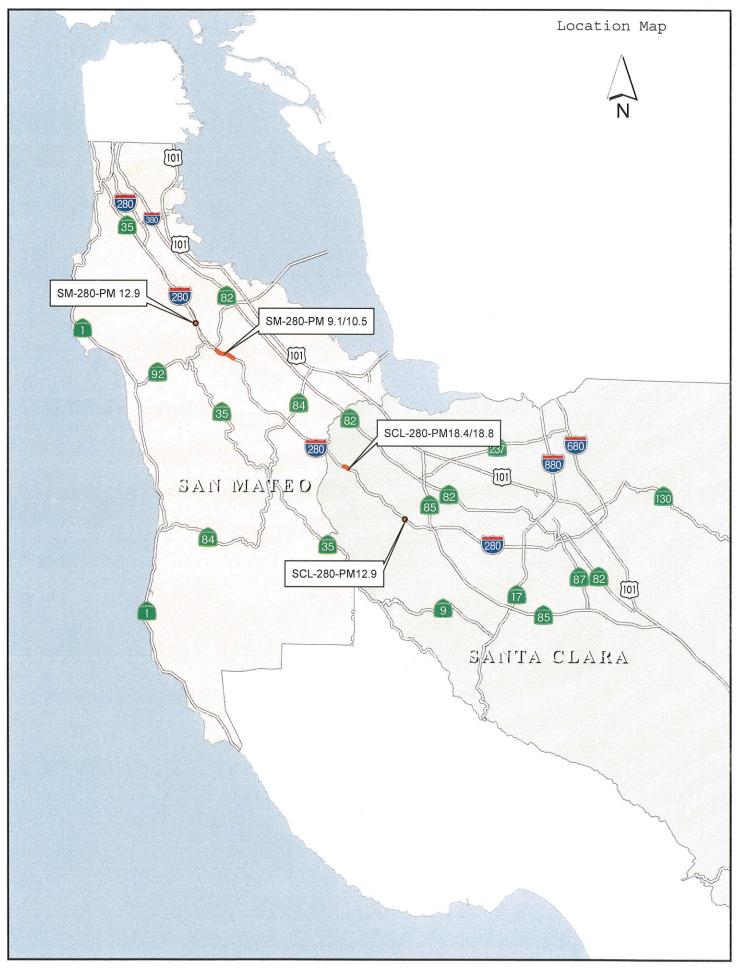
Component	Currently Unprogrammed SHOPP Needs
PAED	\$1,191,000
PS&E	\$1,507,000
Right of Way Support	\$85,000
Right of Way Capital	\$100,000
Construction Support	\$2,072,000
Construction Capital	\$8,950,000
Total Project Cost	\$13,905,000

## Recommendation

Under normal circumstances up to four projects would be programmed to address the repairs discussed herein. However, in an effort to promote asset management, the proximity of these projects make them ideal for combination into a single project.

#### Attachments:

- 1. Location Map
- 2. Photo





Sinkhole at base of SM-280 embankment near Edgewood Road in 2013



Sinkholes at Edgewood Road off-ramp in 2010



Maintenance vehicle shortly after extraction from pavement that collapsed from sinkhole near Edgewood Road in 2011



Erosion at Crystal Springs Road in 2010



Sinkhole at Mora Drive in 2012

#### **Envision Rating System** Self-Assessment Checklist

Sustainability Goal points minimally includes Green Assessment Questions on 5 Tabs (Quality of life, Leadership, Resource Allocation, Natural World, and Climate & Risk). One point is earned for each "Yes" Answer (50 points possible) and bonus points for additional question may be considered (93 additional points). Projects will be ranked for the Sustainability Goal based on these points.

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1. Purpose



QL 1.1 Improve Community Quality of Life	THE ST		1000	
Intent: Improve the net quality of life of all communities affected by the project and mitigate negative impac communities.	ts to		1.00	
Metric: Measures taken to assess community needs and improve quality of life while minimizing negative im	pacts.	3 4		
Assessment Questions:	Yes	No	N/A	1
Are the relevant community needs, goals and issues being addressed in the <u>corridor, nom or project</u> ?	•	0	0	?
Are the potentially <u>negative impacts of the project</u> on the host and nearby communities been reduced or eliminated?	0	0	•	?
Has the <u>project design</u> received broad community endorsement, including community leaders and stakeholder groups?	0	0	•	?
Tota	J 0	of	1	_

rosperity	QL 1.2 Stimulat
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QL 1.2 Stimulate Sustainable Growth and Development				
Intent: Support and stimulate sustainable growth and development, including improvements in job growt productivity, business attractiveness and livability.	h, capacit	y bui	ding,	
Metric: Assessment of the project's impact on the community's sustainable economic growth and develop	oment.			
Assessment Questions:	Yes	No	N/A	
Will the project contribute significantly to local employment?	•	0	0	?
Will the project make a significant increase in local productivity?	•	0	0	?
Will the <u>project concept</u> make the community more attractive to people and businesses?	0	0	•	?
Ţ	otal 2	of	2	

QL 1.3 Develop Local Skills and Capabilities				
Intent: Expand the knowledge, skills and capacity of the community workforce to improve their ability to gr	ow and	devel	op.	
Metric: The extent to which the project will improve local employment levels, skills mix and capabilities.				
Assessment Questions:	Yes	No	N/A	
Does the project team intend to hire and train a substantial number of local workers?	0	0	•	?
Does the project team intend to use a substantial number of local suppliers and specialty firms?	0	0	•	?
/ill the project, through local employment, subcontracting and education programs, make a substantial nprovement in local capacity and competitiveness?		0	•	?
Tol	al 0	of	0	

#### 2. Wellbeing

Res Conservation

#### QL 2.1 Enhance Public Health and Safety

Intent: Take into account the health and safety implications of using new materials, technologies or methodologies above and beyond meeting regulatory requirements.

Metric: Efforts to exceed normal health and safety requirements, taking into account additional risks in the application of new technologies, materials and methodologies.

#### Assessment Questions:

Does the owner and the project team intend to identify, assess and institute new standards to address additional risks and exposures created by the application of new technologies, materials, equipment and/or 0 0 0 methodologies?

Total 0 of 0

Yes No N/A

#### QL 2.2 Minimize Noise and Vibration

Intent: Minimize noise and vibration generated during construction and in the operation of the completed project to maintain and improve community livability.

Metric: The extent to which noise and vibration will be reduced during construction and operation.

Corridor=C	Project nomination =PN	Project=F
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Quality

Assessment Questions:

of Lif				Yes		Corridor=C	Project nomination =PN	Project
	Assessment Questions:	Yes	s No	57% N/A		<b>用。我不得你</b> 我	=PIN	X
	Will the project reduce noise and vibration to levels substantially below local permissable levels during construction and operation?	0	0	•	?			x
	Tol		0 0	6				
	QL 2.3 Minimize Light Pollution	.aı	0 0	1 0		ll see		X
	Intent: Prevent excessive glare, light at night, and light directed skyward to conserve energy and reduce obtr	rusive	lighti	ng and		Х		Х
	excessive glare.	usive	iigi i cii	ing and		Х		Х
	Metric: Lighting meets minimum standards for safety but does not spill over into areas beyond site boundar create obtrusive and disruptive glare.	ies, no	r doe	s it		x		Х
	Assessment Questions:	Yes	No	N/A	4.	X		Х
	Will the project be designed to reduce excessive lighting, prevent light spillage and preserve/restore the night sky?	nt O	0	•	?	X		х
	Tot		0 0	===	_	x		
	QL 2.4 Improve Community Mobility and Access					×		X
	Intent: Locate, design and construct the project in a way that eases traffic congestion, improves mobility and	120000	s do			Х	Х	Х
	promote urban sprawl, and otherwise improves community livability.	acces	is, do	es not		X	X	X
	Metric: Extent to which the project improves access and walkability, reductions in commute times, traverse to	times 1	to exi	sting				
	facilities and transportation. Improved user safety considering all modes, e.g., personal vehicle, commercial and bike/pedestrian.	vehic	e, tra	nsit	M	Х	X	X
	Assessment Questions:	Yes	No	N/A		X	X	X
	Will the project provide good, safe access to adjacent facilities, amenities and transportation hubs?	0	0	•	?	X	×	Х
	Will the project design take into consideration the expected traffic flows and volumes in and around the		270.00	65461		0	^	^
	project site to improve overall mobility and efficiency for non-auto modes?	0	0	•	?		(A.2.)	Х
	Has the project team coordinated the design with other infrastructure assets to reduce traffic congestion,— and improve walkability and livability?	0	0	•	?		×	х
	Tota	al (	of of	0	-	Х	X	x
	QL 2.5 Encourage Alternative Modes of Transportation			No. and		x	x	X
	Intent: Improve accessibility to non-motorized transportation and public transit. Promote alternative transporteduce congestion.	ortatio	n and	1		x x	×	x
	Metric: The degree to which the project has increased walkability, use of public transit, non-motorized transi	t.				х	х	X
	Assessment Questions:	Yes	No	N/A		x	х	Х
	Will the project be within walking distance of accessible multi-modal transportation?				2	^	^	*
	98 9 1 104 TO A SOLUTION OF THE SOLUTION OF TH	0	0	•	?			
	Through its design project scope, will the project encourage the use of transit and/or non-motorized transportation?	0	0	•	?	х	×	X
	Tota	I C	) of	0		х	x	х
	QL 2.6 Improve Accessibility, Safety and Wayfinding					X X	X X	×
	Intent: Improve user accessibility, safety, and wayfinding of the site and surrounding areas.	430.				X	X	x
	Metric: Clarity, simplicity, readability and broad-population reliability in wayfinding, user benefit and safety.					х	x	x
	Assessment Questions:	Yes	No	N/A		Х	X	Х
???	Will the project contain the appropriate signage-fo <del>r safety and</del> -wayfinding in and around the <del>constructed works completed project?</del>	0	0	•	?	x	×	Х
???	Will the project address safety and accessibility in and around the constructed works completed project for users and emergency personnel?	0	0	•	?	<b>X</b>	×	х
222	Will the project extend accessibility and intuitive signage to protect nearby sensitive sites or neighborhoods?	0	0	•	?	х	X	х
	The state of the s	1 0	of	0		X	X	Х
111	Tota					x	×	x
								1000
						x	х	X
nmuni	ty  QL 3.1 Preserve Historic and Cultural Resources  Intent: Preserve or restore significant historical and cultural sites and related resources to preserve and enhar	ice coi	mmur	nity		x x	x x	X X
mmuni	QL 3.1 Preserve Historic and Cultural Resources	nce cor	mmur	nity		x	х	

Yes No N/A

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Envision Rating System Self-Assessment Checklist

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	Will the project minimize negative impacts on historic and cultural resources? At corridor plan and nomination, have you consulted the tribal, historic and cultural resource staff in Environmental (PQS)?	0	0	•	?	х	x	х
	Will the project be designed so that it fully preserves and/or restores historic/cultural resources on or near the project site? (Required in NEPA & CEQA)	0	0	•	?			х
	Total	C	of	0		х	х	х
						х	х	х
Livability	QL 3.2 Preserve Views and Local Character		5/4		T (M)	х		x
SCIVIT	Intent: Design the project in a way that maintains the local character of the community and does not have neg community views.	ative	impa	cts on		х		х
	Metric: Thoroughness of efforts to identify important community views and aspects of local landscape, includi communities, and incorporate them into the project design.	ng				Х		х
	Assessment Questions:	Yes	No	N/A		х		X
	Will the project be scoped to designed in a way that preserves views and local character or the natural landscape?	•	0	0	?	x		X
	Will the project be scoped to designed to improve local character, views or the natural landscape through preservation and/or restorative actions?	0	0	•	?			
	Total	1	. of	1		Х		X
livability	QL 3.3 Enhance Public Space					X	X	×
3601.41	Intent: Improve existing public space including parks, plazas, recreational facilities, or wildlife refuges to enhar livability.	ice co	mmı	inity		х	x	x
	Metric: Plans and commitments to preserve, conserve, enhance and/or restore the defining elements of the p	ublic	space			х	х	X
	Assessment Questions:	Yes	No	N/A		x	х	X
	Will the proposed project make meaningful enhancements to public space or address Section 4(f) properties, including: parks, plazas, recreational facilities, or wildlife refuges to enhance community livability?	0	0	•	?	х	×	X
	Will the project result in a substantial restoration to public space?	0	0	•	?			
	Total	0	of	0		x	x	V

CONTINUE ON TO THE LEADERSHIP CATEGORY  $\Rightarrow$